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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,031

03/18/2004

Denis J. Schaffer

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EXAMINER

NGUYEN, PHU K

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/803,031	<b>Applicant(s)</b> SCHAFFER, DENIS J.	
	<b>Examiner</b> Phu K. Nguyen	<b>Art Unit</b> 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 10-19 is/are rejected.
- 7) ☒ Claim(s) 4, 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 6, 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, "a location" (line 3) is unclear as to its proper antecedent basic as whether it indicates "a location" (line 2). Claim 8 depends on claim 6; therefore, it is rejected under the same reason.

In claim 9, the GUI (line 2) has not been defined as "a graphical User Interface" (line 2).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the PRIOR ART (figure 1, paragraphs [0005]-[0012]).

As per claim 1, Prior Art teaches the claimed “method” comprising: “at least one end condition” (Prior Art, Decision table is used to define an end conditions; the segments HA and HB, paragraph [0008]); “determining a target type of the end condition” (Prior Art, the target point is defined as existing ground; paragraph [0007]); “determining a location of the target” (Prior Art, paragraph [0007]); and “determining when the end condition is valid” (Prior Art, the segments of end conditions hit the target; paragraph [0007]). It is noted that Prior Art does not explicitly teach the “graphical display” of the end condition segments as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 2 adds into claim 1 “valid end conditions(Prior Art, the segments of end conditions hit the target; paragraph [0007]). It is noted that Prior Art does not explicitly teach the “graphical display” of the valid end condition segment as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths

(Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 3 adds into claim 2 “receiving user input placing the target at the location” (Prior Art, user-defined target along the ground; paragraph [0007]).

As per claim 5, Prior Art teaches the claimed “method” comprising:  
“determining targets for a plurality of end conditions; receiving user input selecting one of the targets” (Prior Art, the target point is defined as existing ground; paragraph [0007]). It is noted that Prior Art does not explicitly teach the “displaying the targets to a user” as claimed. However, given the definition of targets in terms of positions, defined ground (Prior Art, paragraphs [007] – [0009]), it would have been obvious to provide a graphical representation of such targets in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, existing ground, ...

Claim 6 is similar to claim 2 which defines the target and determining and displaying the valid solution,” and adds that the target is defined by a pointer on the display’s location which the Prior art does not teach. However, given target definition is a position on the existing ground (Prior art, [0007]) and the graphic Roadway design

software INROADS (Prior Art, [0005]), it would have been obvious to use a pointer to define a position on the display (official notice) because the use of a pointer to define a point on the displayed object is widely known in the art.

Claim 7 adds into claim 5 “dynamically determining the valid solution as the location of the target changes” (Prior Art, the segments of end conditions hit the target; paragraph [0007]). It is noted that Prior Art does not explicitly teach the “displaying the valid solution” as claimed. However, given the definition of targets in terms of positions, existing ground (Prior Art, paragraphs [007] – [0009]), it would have been obvious to provide a graphical representation of such targets in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, existing ground, ...

Claim 8 adds into claim 6 “tracking the position” with the pointer which the Prior art does not teach. However, given target definition is a position on the existing ground (Prior art, [0007]) and the graphic Roadway design software INROADS (Prior Art, [0005]), it would have been obvious to use a pointer to tracking a position on the display (official notice) because the use of a pointer to define a point on the displayed object is widely known in the art.

As per claim 10, Prior Art teaches the claimed “method” comprising:

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“receiving user input defining properties of an end condition” (Prior Art, Decision table is used to define an end conditions; the segments HA and HB, paragraph [0008]). It is noted that Prior Art does not explicitly teach the “graphical display” of the end condition segments as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slops, width, ...

Claim 11 adds into claim 10 “presenting a graphical user interface to a user” which would have been obvious to a graphical interface application as Inroads (Prior Art, paragraph [0005]) in which the data such as position, slop, width of the end conditions are entered (official notice).

Claims 12-15 add into claim 10 the properties of the end conditions (wherein the properties include at least one of a priority, a target type, a target name, an offset, and benching information; wherein the target type includes at least one of a surface, a material, an elevation, a vertical plane, a horizontal plane, and a point; wherein the horizontal plane is one of a feature and an alignment; wherein the vertical plane is one of a feature and an alignment) which would have been obvious (official notice) to the

roadway design art (Prior Art, Inroads software, paragraph [0005]). Since it appears that an Inroads software manual is available to Applicant who are familiar in the Roadway Design area, Applicant is requested to provide these supported documents for assisting Examiner in this case.

Claim 16 adds into claim 10 “locating a point within a template that represents a beginning of the end condition; solving the end conditions that begin at the point” (Prior Art, Decision table is used to define an end conditions; the beginning end condition point A of the segments HA and HB, paragraph [0008]). It is noted that Prior Art does not explicitly teach the “graphical display” of the valid end condition segment as claimed. However, given the definition of end condition segments in terms of positions, slopes, widths (Prior Art, Decision Table, paragraph [0010]), it would have been obvious to provide a graphical representation of such segments in form of “graphical display” because the graphical representation of line segments within the roadway design improves the visual recognize of the user instead of just describe in terms of position, slopes, width, ...

Claim 17 adds into claim 10 “solving the end condition starting with a highest priority and proceeding to a lowest priority” which would have been obvious (official notice) to the roadway design art (Prior Art, Inroads software, paragraph [0005]). Since it appears that an Inroads software manual is available to Applicant who are familiar in the Roadway Design area, Applicant is requested to provide these supported



documents for assisting Examiner in this case.

Claim 18 adds into claim 10 “chaining a second end condition to the end condition” (Prior Art, a list of segments; paragraph [0009]).

Claim 19 adds into claim 18 “determining a solution to the second end condition; and validating the solution only when all end conditions in the chain have valid solutions” (Prior art, when a segment of the chained segments does produce a final intersection, the table stops; paragraph [0009]).

Claims 4, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 4, the allowable feature is “**dynamically solving the at least one end condition based on the current location of the target; and dynamically modifying the display to reflect valid end conditions.**”

In claim 6, the allowable feature is “**displaying a template and the plurality of end conditions graphically in the graphics portion; displaying available targets in**

**the current template; and displaying the non-solved end conditions differently from solved end conditions. “**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phu K. Nguyen  
March 12, 2008

/Phu K. Nguyen/  
Primary Examiner, Art Unit 2628